by Harlow D. Osborne and Joseph B. Epstein ☆

Corporate Profits Since World War II

CORPORATE profits have averaged around one-eighth of the national income in the postwar period, and have fluctuated much more than the total during short-term business swings. They make up one-fourth to one-fifth of total income originating in corporations, which in turn represents more than half of all productive activity in the United States.

This article reviews three aspects of postwar profits experience: the industrial pattern; the relationship of profits to aggregate income arising in corporate business; and the shifts in corporate revenue and costs.

The profits component of national income, shown in the top line of table 1, is measured before deduction of income taxes, since the total including taxes is considered to be earned in production. It is adjusted to take out gains and losses arising from changes in replacement costs of inventories, since these are not considered to result from current production. To the large extent to which profits however measured depend on the level of output, any underlying regularity in their behavior emerges most clearly in terms of this measure, unobscured by the effect of tax rate changes or by what are in effect short-term capital gains and losses on inventory account.[1] It does not, of course, represent the amount available for distribution to stockholders or reinvestment, which in recent years has been cut roughly in half by corporate income taxes.

Course of total profits

Corporate earnings before tax, adjusted to eliminate inventory profits and losses, had moved up annually from 1939 to 1943 at a gradually decelerating pace, turned downward in 1944 and dipped sharply in 1945. After some further decline in the following year a new period of expansion began. The advance was most rapid in 1947 and 1948. Following the 1949 setback, it was resumed at a somewhat slower rate and continued through 1951, when earnings were two-thirds above the wartime peak. From 1951 through late 1954, the general trend seems to have been downward—the 1952 and 1954 dips having much exceeded the minor advance of 1953 on an annual basis. A new upswing followed, and the quarterly highs of 1951 and 1953 have been surpassed in the second and third quarters of 1955, as noted elsewhere in this issue of the SURVEY.

Aside from the effects of variations in earnings so defined, after-tax profits as shown in table 1 have also fluctuated with inventory gains and losses and of course with changes in tax rates. Inventory gains were particularly important in 1946, 1947, and 1950, contributing between $5 billion and $6 billion to before-tax book profits in the first two of these years and nearly $5 billion, or close to one-eighth of the total, in 1950. While considerably larger last year than in 1954, they remained far below the levels of these earlier years.

The average effective rate of Federal, State and local taxes on corporate net income declined sharply from 1945 to 1946, but rose again with the outbreak of war in Korea. In the 1951–53 period it varied around 55 percent, a fraction approaching the highest of World War II. With the Revenue Act of 1954, this rate was cut back to roundly 50 percent, a figure about midway between the 1950 and 1951 levels.

After-tax profits therefore rose somewhat more steeply than did profits before taxes from 1945 to 1950, reached a peak in the latter year, and declined in 1951. The total was stable on an annual basis in 1953–54, the cut in before-tax income being cushioned by the reduction in tax rates, and the net decline from 1951 to 1954 amounted to under 10 percent, less than in either adjusted or unadjusted profits before taxes. In 1955, with national income at a record high, after-tax profits rose to a level above that of any prior year except 1950.

Inventory gains and losses and corporate income taxes will receive some further consideration in the last part of this article.

POSTWAR INDUSTRY PATTERN OF PROFITS

Major postwar fluctuations in aggregate profits have been chiefly dominated by manufacturing, which alone accounts for over half the total, and to a lesser extent by transportation, mining and trade. The relatively volatile profits of these industry divisions have gone through several marked swings while the total of profits in the remaining industry divisions has moved rather consistently upward. (See table 2 and the accompanying chart.)

Manufacturing

Manufacturing profits—before taxes and inclusive of the inventory valuation adjustment—rose from $8¾ billion in 1946, their postwar low, and nearly $13 billion in 1947 to a seasonally adjusted annual rate of close to $23 billion in the first three quarters of 1955. An interim peak of almost $24 billion in 1951 reflected price and production advances following the invasion of Korea in June 1950, at a time when the economy had already substantially recovered from the 1949 recession.

Considerable industrial variation in the timing and pace of change underlay these movements. Contrasts between the durable and nondurable goods industries were marked throughout, and especially in the early postwar period through 1950. Having fallen sharply during the postwar reconversion, when total earnings of nondurable goods manufacturers were rising, durables profits advanced much more than the nondurables in each year from 1947 through 1950.

1. All the profits series utilized in this article exclude other capital gains and losses, are based on "book" depreciation charges, and are measured before the deduction of depletion. For other definitional aspects of the series and a detailed discussion of the inventory valuation adjustment, see the 1954 *National Income* supplement.

NOTE.—MR. OSBORNE AND MR. EPSTEIN ARE MEMBERS OF THE NATIONAL INCOME DIVISION, OFFICE OF BUSINESS ECONOMICS.

The disparity in growth between these two sectors of manufacturing was the result partly of their relative positions at the end of the war and partly of differences in the character of the demand for their products during the years following.

Having been more heavily committed to war production, the durable goods industries in general were the harder hit by the sharp cuts in Government procurement programs toward the end of the war. In 1945, earnings in durable and nondurable goods industries were down 44 percent and 12 percent, respectively, from the war peaks. Reconversion depressed profits in the durables lines still further, from $4½ billion in 1945 to just over $2 billion in 1946. The nondurables industries were able to shift over to peacetime production much more promptly, and demand for some of their consumer products, in particular, was extremely urgent, so that their earnings rose from $5 billion to well over $6 billion in the same period.

From 1946 to 1950, however, the durables industries were consistently able to expand profits faster than the nondurables lines.

	1946	1947	1948	1949	1950
	Profits in billions of dollars				
Durables	2.1	5.3	7.4	7.9	11.9
Nondurables	6.3	7.4	9.3	7.4	8.8
	Percent change from previous year				
Durables	−54	159	38	7	51
Nondurables	25	18	26	−20	11

The basic strength in the market for durable goods during these years reflected not merely war-deferred demands and accumulated savings but also new consumption standards and investment by business to provide for levels of production well above previous peacetime achievements. Durables showed a remarkable homogeneity of behavior. From 1947 to 1950 almost every industry group reported annual advances in profits.[2] The sole exceptions were in 1949, when declines occurred in the group comprising primary and fabricated metals and in the lumber and furniture industries. The subsequent rise to 1950 in the durables total was particularly sharp, with the effects of the recovery and the Korean invasion being superimposed on a general pattern of rapid growth.

In contrast with the consistency of profits changes among the durables industries in this period is the mixed pattern recorded for the nondurables, which seems in general to have reflected the earlier satisfaction of demand backlogs than in the case of durables, and a relatively less rapid growth in current consumption.

While the advance of total nondurables profits was uninterrupted until 1949, there were declines in food, rubber, leather and printing in 1947 and in apparel, paper, rubber and printing in 1948. Profit decreases in the following year affected every nondurables industry but chemicals and tobacco, and the total was off about one-fifth. Its renewed advance in 1950 reflected gains in chemicals, petroleum, paper, and printing, the other 6 nondurables groups distinguished showing declines for the year. Among all of the nondurables industries only chemicals were able to maintain a constant pattern of increased profits throughout the years 1946–50.

After the invasion of Korea the initial market impact of Government procurement was to increase substantially sales of such necessities of war as could be obtained in the short run. Involved also was anticipatory investment by business for producers' items, as contracts were let for the production of military hard goods. Consumers expanded their purchases of items which had been in particularly short supply in World War II. The course of production and profits after the Korean outbreak reflected the time phasing of these stimuli and the gradual accommodation of the economy to the new demands.

The consistently faster expansion of profits in durables than in nondurables ended after 1950. Durables advanced more or decreased less than nondurables in two of the succeeding four years, and also showed a sharper rise for the first 9 months of 1955. The differences in movement, however, were much less conspicuous than in the earlier years.

2. The industry classification used here is that applied to corporate profits in the 1954 *National Income* supplement. Within manufacturing it distinguishes 7 broad durables groups and 10 nondurables.

Table 1.—Corporate Profits and Related Totals, 1929–54

[Millions of dollars]

	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942
Corporate profits and inventory valuation adjustment	10,100	6,462	1,634	−1,970	−1,993	1,091	2,918	5,003	6,304	4,263	5,689	9,120	14,511	19,678
Corporate profits before tax	9,628	3,322	−780	−3,017	151	1,716	3,145	5,740	6,235	3,300	6,403	9,320	16,982	20,882
Corporate profits tax liability	1,360	842	498	335	521	744	951	1,409	1,502	1,029	1,441	2,834	7,610	11,415
Corporate profits after tax	8,250	2,480	−1,278	−3,402	−370	972	2,194	4,331	4,733	2,271	4,962	6,486	9,372	9,467
Dividends	5,813	5,490	4,088	2,565	2,056	2,587	2,863	4,548	4,685	3,187	3,788	4,043	4,458	4,289
Undistributed profits	2,446	−3,010	−5,366	−5,967	−2,426	−1,615	−669	−217	48	−916	1,174	2,443	4,914	5,178
Inventory valuation adjustment	472	3,260	2,414	1,047	−2,143	−625	−227	−738	−31	963	−714	−200	−2,471	−1,204
Addendum: net inflow of profits from "rest of the world" included in lines 1, 2, 4, and 6	232	137	−4	−34	−2	60	150	164	122	247	184	234	231	225

	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955 (first 9 months, seasonally adjusted at annual rates)
Corporate profits and inventory valuation adjustment	23,781	23,033	18,413	17,288	23,628	30,619	28,142	35,186	39,913	36,993	37,187	33,815	41,200
Corporate profits before tax	24,554	23,320	18,977	22,561	29,525	32,769	26,198	39,970	41,173	35,936	38,274	34,042	42,800
Corporate profits tax liability	14,074	12,949	10,689	9,111	11,283	12,510	10,411	17,829	22,470	19,788	21,260	17,062	21,600
Corporate profits after tax	10,480	10,371	8,288	13,440	18,242	20,259	15,787	22,141	18,697	16,148	17,008	16,980	21,300
Dividends	4,494	4,673	4,691	5,784	6,521	7,248	7,458	9,207	9,090	9,000	9,291	10,006	10,700
Undistributed profits	5,996	5,698	3,597	7,656	11,721	13,011	8,329	12,934	9,607	7,148	7,717	6,952	10,600
Inventory valuation adjustment	−773	−287	−564	−5,263	−5,890	−2,150	1,943	−4,804	−1,260	957	−1,087	−227	−1,600
Addendum: net inflow of profits from "rest of the world" included in lines 1, 2, 4, and 6	238	293	228	425	690	835	832	1,030	1,216	1,121	1,082	1,354	1,600

Source: Department of Commerce, Office of Business Economics.

The respective annual changes in earnings through 1954 were as follows.

	1951	1952	1953	1954
	Profits in billions of dollars			
Durables	13.2	11.6	11.9	9.7
Nondurables	10.6	9.0	8.7	7.9
	Percent change from previous year			
Durables	11	−12	3	−17
Nondurables	29	−15	−3	−9

The sharp rise in the total for nondurables in 1951 reflected expansion of demand for industrial materials and consumer goods. Exceptions to the general upswing in adjusted profits were the food and tobacco groups, which felt the impact of increased raw materials costs before these were fully reflected in the prices of processed goods.

The durables total in 1951 was adversely affected by a pronounced slump in auto profits, which fell for the first time since 1946. Producers in virtually all other durables lines improved their profit positions somewhat further, though after the sharp rise in the preceding year the gains were not generally as marked as in the case of the nondurables industries.

The general sales expansion conspicuous in 1950 and 1951 slowed in 1952, and profits declined moderately as costs continued to advance. All the nondurables except food, tobacco and printing showed declines in 1952. The most severe drop was in textiles, which except for a spurt in the previous year had registered no increases in profits since 1948. The profits decline in durables was slightly smaller than that in nondurables. Earnings in the machinery and equipment industries generally held about even or recorded gains, although the steel strike was accompanied by a profits drop of one-third in the primary and fabricated metals group and the nonmetallic durables also showed considerable declines.

In 1953 the durables total recovered. However, sharp declines after midyear limited the overall 1952–53 gain to 3 percent, and extended into 1954 to produce a substantial reduction in the annual totals for most industries in that year.

The total for the nondurables drifted downward slightly from 1952 to 1953 as 6 of the 10 industry groups showed reduced earnings. Half of the declines were slight but those recorded in textiles, apparel and rubber amounted to between one-sixth and one-fourth. In the following year the nondurables total contracted somewhat faster as profits were reduced in all groups except tobacco and leather. The overall decline from 1953 to 1954 in nondurables profits was not as severe as that experienced in the durables industries, however.

The substantial increases achieved in 1955 in nondurables and particularly in durables manufacturing profits have been described earlier in this issue. These advances carried the

Table 2.—Corporate Profits and Dividends, by Industry, 1945–54

[Millions of dollars]

	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954
Agriculture, forestry, and fisheries [1]										
Profits before tax	92	136	146	128	69	157	65	38	42	41
Profits after tax	32	73	78	69	40	68	11	−25	−24	−22
Net dividends paid	14	29	62	64	53	80	70	49	30	28
Mining										
Profits and inventory valuation adjustment	343	368	683	1,300	966	1,325	1,400	1,238	1,290	1,260
Profits before tax	347	438	953	1,430	925	1,374	1,418	1,249	1,330	1,258
Profits after tax	239	321	684	1,031	673	981	920	807	881	619
Net dividends paid	138	177	260	301	339	455	503	322	498	517
Contract construction										
Profits and inventory valuation adjustment	86	172	268	524	538	480	521	665	626	569
Profits before tax	88	211	377	560	514	541	533	509	624	553
Profits after tax	50	125	230	348	308	387	229	244	250	268
Net dividends paid	16	30	30	56	62	68	81	66	76	87
Manufacturing										
Profits and inventory valuation adjustment	9,520	8,361	12,702	16,062	15,234	20,198	23,850	20,608	20,677	17,620
Durables	4,481	2,067	5,344	7,350	7,784	11,921	13,206	11,597	11,933	9,680
Nondurables	5,039	6,294	7,358	8,712	7,450	8,277	10,644	9,011	8,744	7,937
Profits before tax	9,903	11,402	16,520	18,103	14,140	23,280	24,512	19,959	21,420	17,824
Profits after tax	4,030	6,658	10,055	11,036	8,417	12,375	10,260	8,371	8,947	8,709
Net dividends paid	2,442	2,856	3,414	3,738	3,969	4,836	4,591	4,531	4,652	4,812
Wholesale and retail trade										
Profits and inventory valuation adjustment	3,309	3,009	4,434	5,402	4,400	4,826	4,976	4,742	4,337	4,045
Profits before tax	3,420	5,660	6,062	5,768	3,833	6,276	5,446	4,382	4,568	4,074
Profits after tax	1,460	3,429	3,780	3,524	2,241	3,578	2,584	1,999	2,052	1,939
Net dividends paid	498	816	807	649	653	1,002	946	883	818	867
Finance, insurance, and real estate [1]										
Profits before tax	1,490	1,630	1,593	2,224	2,574	2,663	2,800	3,262	3,704	3,703
Profits after tax	816	887	878	1,236	1,396	1,271	1,096	1,322	1,495	1,411
Net dividends paid	522	631	570	643	656	825	815	835	840	837
Transportation										
Profits and inventory valuation adjustment	1,308	382	948	1,496	1,169	1,896	1,893	1,820	1,807	1,001
Profits before tax	1,330	326	1,136	1,649	1,101	1,996	1,961	1,827	1,643	1,010
Profits after tax	518	179	630	963	623	1,100	904	807	735	470
Net dividends paid	292	265	246	312	271	368	393	379	445	434
Communications and public utilities										
Profits and inventory valuation adjustment	1,481	1,424	1,211	1,398	1,742	2,079	2,006	2,946	3,375	3,602
Profits before tax	1,473	1,507	1,468	1,486	1,674	2,139	2,635	2,966	3,296	3,681
Profits after tax	683	913	822	897	993	1,244	1,268	1,391	1,523	1,636
Net dividends paid	623	657	714	741	831	1,032	1,151	1,280	1,433	1,488
Services [1]										
Profits before tax	575	727	648	570	600	494	540	544	548	603
Profits after tax	253	430	390	332	276	257	226	211	312	290
Net dividends paid	69	145	141	142	160	137	143	154	144	160
Rest of the world [1]										
Profits before and after taxes	228	425	680	838	832	1,000	1,215	1,121	1,082	1,300
Net dividends paid	76	129	221	254	305	426	418	302	237	378

1. Inventory valuation adjustment taken as zero.

Source: U. S. Department of Commerce, Office of Business Economics.

overall seasonally adjusted annual rate for the first 9 months close to the all-time high recorded for the early post-Korean year 1951.

It should be noted that data for profits in manufacturing and other segments of the economy after 1952 are still preliminary, and these movements will be subject to final analysis only when more data become available.

Transportation

About three-fifths of the postwar profits in transportation have originated in the railroad industry, which has also accounted for the bulk of the short term fluctuation. With a few exceptions traceable to special circumstances in this industry, profits in the transportation division have tended to conform to the movements of the all-industry total, but with sharper swings.

The postwar trend of profits in transportation as a whole reflects a drop from wartime highs in the railroad group and in local transit systems, only partly offset by expansion in other branches. Before-tax earnings, adjusted for inventory gains and losses, declined from a war peak of $3 billion in 1943 to $½ billion in 1946, recovering to a postwar high of $2 billion in 1950 and 1951 under the stimulus of the Korean invasion. The total drifted irregularly lower during the next three years to about $1 billion in 1954, and showed some recovery in the first 3 quarters of 1955.

Rail profits declined steeply at the end of the war to a 1946 low of $0.1 billion, rose to $1.2 billion two years later as the postwar recovery gathered speed, and passed this level in 1950 after a drop of over 40 percent in 1949. The total dipped to around $1 billion annually for 1951–53 and dropped sharply in 1954, but showed a vigorous recovery last year. Railroad profits are generally sensitive to changes in revenue; they declined in 1951, however, as the revenue increase for that year was largely absorbed by higher compensation of employees. The 1952–53 expansion of revenue was similarly offset by advances in emergency amortization charges and other costs.

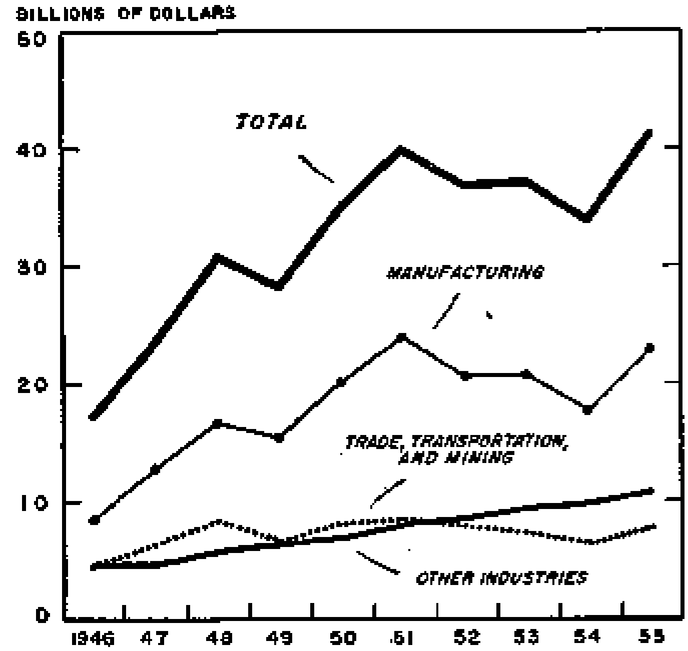
Among the nonrail transportation groups profits of the airlines have risen most rapidly in the postwar period, reaching a 1954 level about triple the highest annual total recorded in World War II, after an interim of substantial losses during the reconversion years. Pipeline and motor freight carriers' profits have also expanded substantially above their war peaks. Serious declines have been recorded for local passenger transportation, as the use of private cars in lieu of public transportation has increased with the postwar population shift to the suburbs.

Mining

Corporate income in the mining division, adjusted to eliminate inventory gains and losses, almost quadrupled its 1945–46 average to reach an early postwar peak of close to $1½ billion in 1948. (In conformity with the general definition of profits noted earlier, the measure used here is gross of depletion allowances.) After dropping below $1 billion in 1949 the aggregate approached $1½ billion again in 1951. The annual total varied narrowly in the range of $1.2 to $1.3 billion during 1952–54, and expanded in 1955.

There has been a major postwar change in the industry composition of this aggregate. The oil and gas component has accounted for over 60 percent of the total in the past few years, doubling its 1946 proportion. Other mining industries have declined in relative importance, although only the coal groups have shown an actual dollar decrease. Corporate income in the coal industry dropped from about one-third of the division total in 1946 to well under 10 percent in the most recent years for which data are available. Railroads, once large users of coal, have carried out a widespread program of dieselization; and various other major consumers have also shifted from coal to alternative fuels including natural gas.[3]

Corporate Profits* for Broad Industrial Groups



* Before tax, and including inventory valuation adjustment; 1955 data are for 9 months, seasonally adjusted, at annual rates

U. S. Department of Commerce, Office of Business Economics 56-1-4

Adjusted profits in trade have accounted for from one-eighth to one-fifth of total corporate profits in the postwar years—a larger part of the total than any other division except manufacturing. Trade profits rose consistently throughout the war and early postwar period to a peak in 1948, dropped sharply in 1949, and have since fluctuated within a comparatively narrow range.

	1946	1947	1948	1949	1950	1951	1952	1953	1954
	Profits in billions of dollars								
Trade	3.7	4.5	5.4	4.4	4.8	5.0	4.7	4.3	4.0
Nondurables manufacturing	6.3	7.4	9.3	7.4	8.3	10.0	9.0	8.7	7.9
	Percent change from previous year								
Trade	11	21	21	−10	10	3	−5	−9	−7
Nondurables manufacturing	25	19	25	−20	11	20	−15	−3	−9

The bulk of nondurable manufactures ordinarily passes through trade channels, and during most of the early postwar period there was a marked similarity between the movement of profits in trade and in nondurables manufacturing.

3. A substantial portion of extractive activity in this country is attributed in the corporate data to industries other than mining. For example, the activity of coal and iron mines owned by corporations in the primary iron and steel group is included in the statistics for the latter industry. It may be noted that the converse case also occurs, though on a smaller scale.

The 1951 upswing and 1952 drop in the manufacturing series, however, were accompanied by comparatively minor changes in trade profits. The hump for manufacturing seems to have been due in considerable part to expansion in Government purchases of soft goods after Korea, which involved a less-than-proportional direct stimulus to trade corporation sales. The 1952 reaction similarly was more limited in trade than in manufacturing, but the further profits decline recorded for 1953 is estimated from partial data to have been significantly sharper than that in manufacturing, as margins narrowed.

Other industries

The total of the remaining industry divisions, comprising finance, insurance and real estate, communications and public utilities, service, construction, agriculture, and "the rest of the world", showed aggregate profits rising $½ billion to $1 billion annually during most of the period since the end of World War II. There were exceptions in 1947, when the increase was comparatively small, and in 1948, when it amounted to a little over $1 billion. These annual gains reflected a variety of changes among the industries cited.

Finance, insurance, and real estate, the largest of these divisions in point of profits, showed a virtually uninterrupted advance over the entire war and postwar period. At more than $3¼ billion by 1954, profits were over twice their 1946 level, which in turn was well above that of any previous year. This advance has been associated in general with the use of credit to help finance the broad economic expansion of the period.

The course of profits in the communications and public utilities division has been determined largely by the experience of the electric and gas utilities and the telephone and telegraph group. The utilities, which since the war have accounted for from two-thirds to three-fourths of the profits earned in the division, have recorded a steady expansion as industrial and residential use of power has been stimulated by technological progress and growth in the number of structures to be served. Moreover, the extensive postwar additions to both generating capacity and distribution facilities have greatly increased the average efficiency of operations in the industry. Profits, which at over $1 billion in 1946 were already above the wartime peak, moved steadily upward to approach $2½ billion by 1954. The record of profits in the telephone and telegraph industry shows more variation. The total dropped from $½ billion in 1944 to between $0.2 and $0.3 billion in 1947 and 1948, but has since advanced rapidly, exceeding $1 billion by 1954.

Contract construction emerged from the war in a relatively depressed state, public construction for defense having declined sharply and private construction activity being still subject to controls. Deferred demand for private and for nonwar public construction—particularly State and local types—promoted a quick recovery, however. By 1949 profits had passed the $½ billion mark and stood 75 percent above the wartime peak. The total has since expanded somewhat further.

Corporate profits in the services division rose through the war and reached a peak at $0.7 billion in 1946, but declined from year to year thereafter to around $½ billion in 1950. The total recovered fractionally in 1951 and held stable until 1954, when a further advance accompanied the cut in the Federal tax on admissions in that year. The initial downdrift of the division total reflected chiefly a contraction in profits of the amusement and hotel groups. The decline in these virtually ceased after 1950, but for the period 1946–54 as a whole more than offset smaller net increases in the other service industry groups.

Profits ascribed to the "rest of the world" represent the net balance of branch profits and dividends received from abroad less payments of such income to foreign residents. This balance is included in the corporate profits share of the national income, although attributed to foreign rather than to U. S. business. It has expanded sharply since the world war, as foreign earnings have reflected the rehabilitation of the war-torn economies of Europe and Asia and the postwar upswing of business in Latin America, Canada and other areas. At about $1½ billion in 1954, the total net inflow was more than three times as large as in 1946.

PROFIT RATIOS

Setting aside the influence of income tax rates and inventory valuation practices for separate consideration, the course of total profits depends very largely on that of production and sales. It is appropriate in this context to confine the analysis to the corporate segment of the economy.

One way of studying profits is to examine their relationship to total income originating in corporations—profits, employee compensation, and net interest—which is a measure of net production. The ratio of adjusted before-tax profits to total income originating in U. S. corporations is shown in the accompanying chart.

This percentage has varied considerably over time. It was lowest in the depression of the nineteen-thirties, and has since touched shorter-run low points in 1938, 1946, 1949 and 1954. It has averaged highest in periods of peak activity such as 1926–29, World War II, and 1950–53. The postwar movement is examined later in this report, after a review of data bearing on the longer-term trend.

Trend of profit ratio

As can be seen, the charted variations have brought the percentage back repeatedly to an almost horizontal trendline. Long-term differences between cyclically more or less comparable dates are not large. For example, the average for 1926–29, representing the four years of largest incomes in the early part of the period spanned by the chart, was about 21 percent. The average for the years 1950–53, also a time of prosperity, was about 24 percent.

The rise of three percentage points suggested by this comparison seems to have stemmed primarily if not exclusively from a shift in the form in which property income is distributed. With the rise in the profits fraction of corporate income originating has come a very nearly equal decline in the interest share, so that profits and net interest combined made up substantially the same proportion—around 24½ percent—of the total in 1950–53 as in 1926–29.

The shift in the composition of property income has reflected in part a decline in interest-bearing debt relative to corporate assets as reliance upon internal sources of funds has increased. Even more important, however, is the fact that since the late nineteen-twenties market forces operating within the changing institutional framework of the period have brought about a considerable fall in the level of interest rates relative to the rate of return on corporate assets.

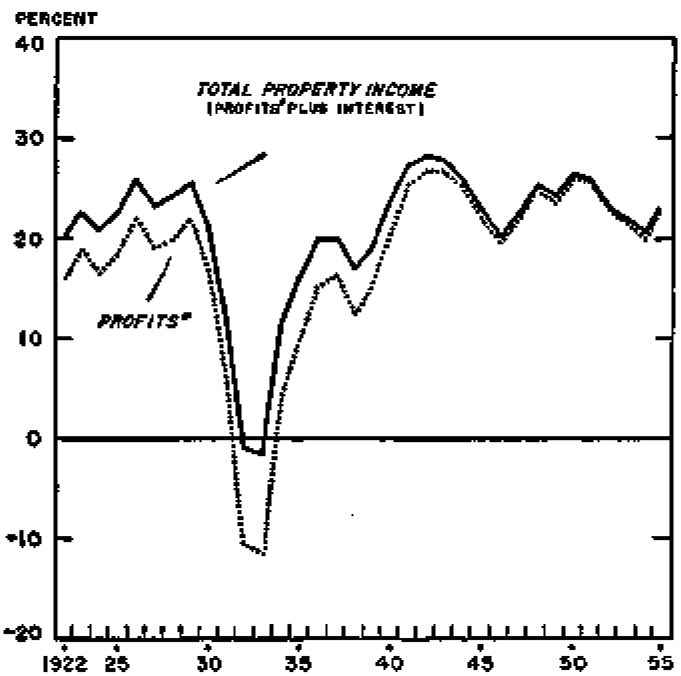
In order to set aside the effect of this shift in form of payment, the influence of other factors affecting the trend of the profits share may be examined in terms of the combined fraction of profits and interest in corporate income originating, which is also shown in the chart.

The size of this fraction reflects the many forces bearing on the cost-price structure. The roles of these are difficult to measure, but two sorts of effects which are of some general interest may be distinguished in the data.

On the one hand, the balance between labor services and property services required to turn out a particular set of products may change, or one of these types of service may become cheaper relative to the other. If such changes occur and are not mutually offsetting in their effects, the ratio of property income to total income originating will shift for the industries affected and perhaps for corporate business as a whole.

On the other hand, changing market conditions lead to shifts in the product composition of output. The proportions in which labor and property services are employed differ according to the product being made, and such market shifts may happen to favor relative expansion in those types of output using a higher (or lower) than average proportion of labor to capital. The overall corporate ratio of property income to total income will then tend to change accordingly, even if the normal proportions for every individual product remain the same as before.

Profits and Total Property Income as Percent of Income Originating in U. S. Corporations



* Before tax, and including inventory valuation adjustment; 1955 data are for 9 months, seasonally adjusted, at annual rates

U. S. Department of Commerce, Office of Business Economics 56-1-6

It is of interest to test whether the long-term stability in the property income share of total corporate income was due to the offsetting of shifts in income distribution within industries by shifts in relative size of industries, or whether it was due to the absence of important shifts in either. Such a test involves technical problems considered in the appendix. Here only two points need be noted. The finer the industrial detail provided in the data, the more accurately the first type of effect will be distinguished from the second. Again, care must be taken to select periods as alike as possible in all respects other than those reflecting trends, since the evidences of the latter are likely otherwise to be swamped by the effects of short-term differences. Because of data limitations, these requirements called for the making of two separate comparisons here.

First, property income percentages for 1929 and 1951 were analyzed in the finest industrial detail practicable, distinguishing 51 industry groups. The results suggest that there was no general tendency to secular change in the property income fraction, apart from the effect of shifts in the product mix, and that shifts of the latter type had also offset one another so closely as to produce a net change on the order of only ½ percentage point.

As a limited check on the possibility that actual trend changes were masked in this comparison by special and transitory conditions which existed in one year but not in the other, a corresponding analysis was made in terms of industry averages for the four prosperous years 1950–53 as against the years 1926–29. A major reduction in the degree of industry detail, and to some extent also in the accuracy of the data, was necessary in this case.

Over the quarter-century period, changes in the property income ratios within various individual industries balanced out to exert a net positive effect amounting to ¾ percentage point on the all-corporation ratio. Changes in the industrial distribution made for a decline of 1 percentage point, a little more than offsetting this effect.

Thus, both studies suggest that the overall secular stability of the property income ratio was not due to the offsetting of important changes within industries by the effects of changes in the relative weights of the various industries. Rather, the stability seems to have resulted from the fact that neither type of change had any significant effect on the all-corporation ratio.

Not only are the net effects small, but the nature of the industry variations underlying them indicates the absence of any definite tendency common among industries. In the comparison of 1950–53 with 1926–29 there was an approximately even division between lines with shrinking property income ratios and lines with higher ratios, and changes in relative importance of the various industries were likewise about evenly divided between shifts tending to raise the overall ratio and shifts tending to lower it. The same lack of uniformity appeared in the 1929–51 comparison.

In the latter comparison, the contrast between the changes in the finance, insurance and real estate division and those in nonfinancial corporations is of some interest. Declines both in the relative importance of the finance division and in its ratio of property income to total income combined to contribute a negative 1½ percentage points to the all-industry ratio; while changes in the nonfinancial groups more than offset this effect to produce the small overall rise actually recorded for the all-industry ratio.

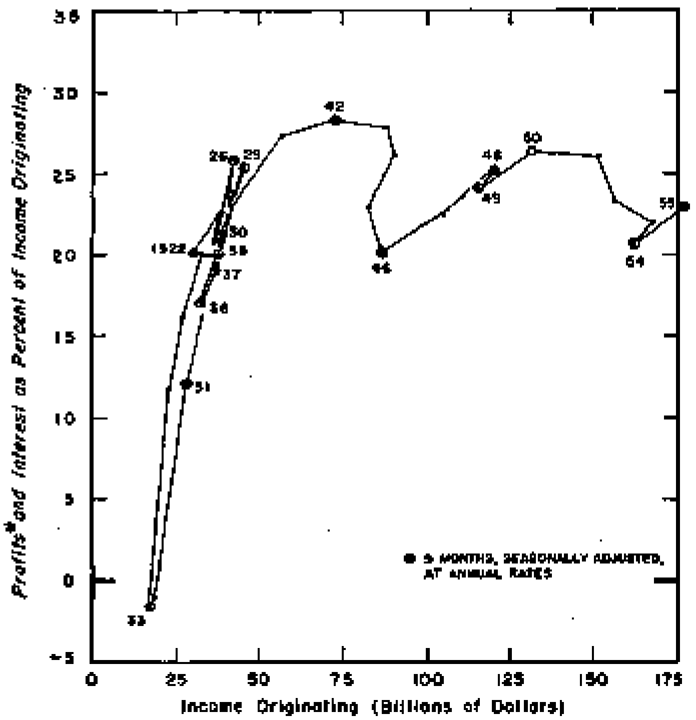
This general type of analysis, it should be noted in conclusion, does not go very far in distinguishing the conditions ultimately responsible for determining the property income fraction. The varied and possibly offsetting economic forces which have led to shifts of each type are not distinguished. To do so would require data not at present available and also a further elaboration of theories which can be tested statistically.

Swings in the profit margin

The tendency of the profits percentage of corporate income to rise and fall with the level of general business activity has already been noted. An exception has been indicated, however, for the years 1950–53, when the percentage declined in the face of a continued expansion of sales and income originating. The postwar swing of the profit and property income ratios will be examined in historical perspective here, preliminary to a review of its mechanics in terms of revenue and cost changes in the next section.

The relation of the property income percentage to total income originating is examined in the adjacent scatter diagram. Because the time sequence of changes is very important for the interpretation of this chart, the plotted points have been connected in chronological order.[4]

Income Originating in U. S. Corporations, and Associated Property Income Ratios



* Before tax, and including inventory valuation adjustment

U. S. Department of Commerce, Office of Business Economics 56-1-6

Consistently with the horizontal time trend noted above, the ratio is seen to be approximately the same for widely different amounts of total income, if the years compared are cyclically alike. However, certain portions of the line show fairly constant positive slopes. These reflect temporarily stable relationships which, in contrast to the long-term norm, involved a sharp response of the property income fraction to changes in total income. One such relationship spans the early postwar period from 1946 through 1950; another ended early in World War II; and a slightly different one is perceptible for the period 1922–26. After a few years, it will be noted, each of these relationships began to break up. As the expansion in total income continued, the property income fraction became less responsive, leveled off, and turned downward.

Following such a readjustment in 1926–29, and again after the shift of 1942–46, there emerged a new relationship; this appears in the chart as another portion of the line somewhat further to the right—i. e., at a higher income level—which also shows a positive slope. Under the new relationship, the fraction is seen to have averaged about the same as before for cyclically similar years despite the higher level of total income.

In view of the basic long-term stability in the property income ratio, these readjustments may plausibly be interpreted as reactions from short-run relationships inconsistent with the underlying trend; and the decline in the ratio after 1950 may be viewed as the latest in the series of such adjustments.

4. It may be noted that the analysis which follows could equally well have been developed from a scatter diagram showing dollar values for both variables. The alternative chart used here, however, is simpler to interpret in the present context.

Applicability of past experience

The postwar period from 1946 to 1954 showed important similarities as well as differences by comparison with the earlier periods. It resembled 1938–46, for instance, in witnessing a great expansion in market demand and production capacity, with capacity tending to catch up as the demand expansion slowed. The various economic conditions associated with a defense effort, including major Government procurement programs, controls and excess profits taxes, were also common to both periods; most of them were far more marked in the earlier, however, and private market demand was a much more important factor in the later. The two periods differed also in the cyclical position of their starting points, business activity in 1938 having been relatively much more depressed than in 1946. These differences largely account for the comparative irregularity and more restricted overall movement of profit ratios in the later period.

The twenties also witnessed an expansion in output and in production capacity. However, this period was conspicuously different in being one of world peace and one in which the market role of Government was relatively quite limited. As in the postwar period, the fluctuations of private demand led to considerable irregularity in the course of business activity, which was reflected in profit ratios. This irregularity was the more conspicuous because, due chiefly to the relative stability of prices and wages, the uptrend in dollar values was less marked in these years than in the later periods.

The observed downswings of overall profit ratios in the face of continuing general economic expansion in 1926–29, 1942–44, and 1950–53 form a clear-cut pattern; the interpretation of this, however, is open to question. On the one hand, it may be taken as likely to prove generally characteristic of periods of rapid but decelerating rise to high levels of business activity. On the other hand, it may be thought to have been largely a reflection of circumstances associated with the defense effort in each of the two later periods. The evidence provided by the 1922–29 record, while suggestive, is not sufficiently clear to settle this question.

From data now available, the profit ratio seems to have recovered last year to a point somewhere near the 1952 level. It is still too early, of course, to determine how this recovery fits into the pattern of past experience recorded in the chart.

Industry variations

With differences generally in line with the variations in industry profits experience described above, the swing in profit ratios during the postwar expansion of total income originating was duplicated in most of the principal industry divisions. The record for manufacturing and transportation shows peak ratios reached in 1950–51, while income originating in these lines attained its pre-1955 highs 2 or 3 years later. The top ratios for trade, mining and contract construction (up to last year, for which data are not yet available) were all recorded prior to 1951. Total income in these three industries continued expanding into 1953 and, in the cases of trade and construction, through 1954.

The only major exceptions to the general pattern were the finance and public utilities divisions. In finance the pre-1955 highs came later—that for the profit ratio being reached in 1953 and that for total income in 1954. In communications and public utilities, both the total and the profit percentage continued rising through 1954.

The swing in profit ratios during the World War II expansion was similarly rather general among the industries which contribute most to corporate profits. The 1922–29 experience was less uniform in this respect. In only two of the principal divisions, manufacturing and trade—which happened to be the two largest—was there a clear pattern of downturn in ratios preceding contraction in total income. It is perhaps significant that in this period fluctuations in income originating were more marked from year to year than in terms of an overall cycle, and that the peak profit ratios coincided for several divisions with sharp but isolated peaks in income recorded for various industries in different years—1926, 1928, or 1929. This suggests that any influence which economy-wide cost trends may have had on profit ratios in general was at least partly obscured by the effect of the short-term variations in sales of specific divisions.

COST STRUCTURE OF CORPORATE BUSINESS

The preceding analysis has been cast in the frame of reference of income originating, which measures the net value added to production in corporate business as the sum of profits, employee compensation, and interest. Because labor cost is such a large element in the cost structure, changes in the compensation of employees are likely to prove a major determinant of the profit ratio. Other factors also play a significant part in the determination of profits, however, and justify broadening the analysis of the postwar period by a consideration of the shifts occurring in sales, corporate gross product, and the general cost structure of corporate business. This part of the analysis cannot in general be carried beyond 1954 at present.

The frame of reference used is illustrated in the text table opposite. For the present purpose, the change in corporate inventories is treated as an adjustment to sales, and all costs incurred are entered as charges to the combined total.

Cost purchases (materials, etc., bought from other business enterprises and charged to current account or accumulated in inventory) and sales here include intercorporate transactions. These cannot be estimated separately but are known to constitute a substantial and sometimes significantly shifting fraction of each of the two totals. Although the proportions shown typify the experience of the average corporation, for analysis of corporate business as a whole it would be preferable to deal with consolidated totals, since changes in the profit margin on intercorporate transactions shift profits between buyer and seller companies without affecting the all-corporation aggregate of earnings. Discussion of cost purchases and sales will therefore stress particularly the factors which would affect a consolidated account.

Annual values for the unconsolidated credits and charges to corporate account are shown, together with profit ratios, in table 3. While some of these values are taken from the regular statistics of the national income and product, others are comparatively crude approximations developed only for this study. The special estimates used are described in the technical note at the end of the report. The cost purchases series is derived as a residual.

Credits and Charges to Corporate Account (unconsolidated), 1954

[Billions of dollars]

Charges		Credits	
Cost purchases	337	Corporate sales	535
Charges to corporate gross product	*195*	Inventory accumulation	−3
Indirect taxes	18		
Capital consumption allowances	15		
Income originating	*162*		
Compensation of employees	129		
Net interest	1		
Profits, including IVA	32		
Total charges	532	Total credits	532

The postwar course of adjusted sales has been broadly similar to that of income originating, a rapid expansion in the early part of the period having been followed by a slower growth after 1950–51. Both price movements and changes in real output contributed to this pattern, sharp advances in each during the early years giving place to more gradual uptrends thereafter.

Correspondingly, the course of the profit ratio on sales has resembled that of the profits percentage of income originating in corporate business. Profits having advanced relatively more from 1946 to 1950–51 than did adjusted sales, the percentage margin increased. However, sales, like income

Table 3.—Credits and Charges to Account of Corporate Business (unconsolidated), 1938-54

[Billions of dollars]

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954
Total credits to corporate account	115.3	128.8	145.4	189.4	214.4	244.6	257.9	252.5	292.5	367.2	411.2	389.3	459.7	520.7	527.4	555.1	531.6
Sales	116.2	128.6	143.8	186.1	214.0	245.1	259.0	253.5	286.5	365.9	409.1	390.9	454.7	512.6	525.6	553.6	534.6
Change in inventories	−.9	.3	1.6	3.3	.5	−.5	−1.1	−1.0	6.0	1.2	2.1	−1.6	4.9	8.1	1.8	1.5	−3.0
Total charges to corporate account	115.3	128.8	145.4	189.4	214.4	244.6	257.9	252.5	292.5	367.2	411.2	389.3	459.7	520.7	527.4	555.1	531.6
Cost purchases	74.0	83.4	93.2	121.8	129.2	143.5	153.2	154.4	190.6	244.3	270.5	252.0	304.0	342.7	341.1	355.2	336.6
Charges to corporate gross product	41.3	45.4	52.2	67.6	85.2	101.1	104.7	98.1	101.9	122.9	140.7	137.2	155.6	178.0	186.3	199.9	195.1
Indirect taxes [1]	6.2	6.3	6.7	6.7	7.1	7.5	8.2	9.0	10.3	11.8	12.8	13.3	14.0	15.6	17.1	18.1	17.5
Capital consumption allowances	2.8	2.9	3.1	4.5	5.2	5.6	6.4	6.8	5.2	6.4	7.7	8.5	9.6	11.0	12.3	13.8	15.3
Income originating in corporate business	32.3	36.2	42.4	56.4	73.0	88.1	90.1	82.4	86.3	104.7	120.2	115.4	131.0	151.4	156.9	168.0	162.3
Compensation of employees	26.8	29.3	32.3	41.1	52.3	63.6	66.5	63.5	69.0	81.2	89.8	87.4	96.0	111.9	120.5	131.0	128.8
Net interest	1.5	1.4	1.2	1.1	1.2	.9	.8	.7	.5	.6	.6	.7	.6	.7	.6	.8	.9
Profits before tax, including inventory valuation adjustment	4.0	5.5	8.8	14.3	19.5	23.6	22.7	18.2	16.9	22.9	29.8	27.3	34.1	38.7	35.8	36.1	32.4
Addendum: Profits before tax and inventory valuation adjustment as percent of—																	
Sales and inventory change	3.5	4.3	6.1	7.5	9.1	9.6	8.8	7.2	5.8	6.2	7.2	7.0	7.4	7.4	6.8	6.5	6.1
Income originating in corporate business	12.5	15.2	20.9	25.3	26.7	26.8	25.2	22.1	19.5	21.9	24.8	23.7	26.0	25.6	22.8	21.5	20.0

1. A small allowance for corporate transfer payments is included here, and major cash subsidies are netted out.

Source: U. S. Department of Commerce, Office of Business Economics.

originating, continued to rise after profits passed their 1951 peak. A slight advance accompanied the 1951–52 decline of 7½ percent in earnings. A 5 percent sales expansion in 1953 left profits virtually unchanged. With sales off 4 percent in the following year, the profits measure was down 10 percent.

Postwar cost trends

The overall postwar pattern of sharp initial rise, early leveling off, and ultimate downturn of profit percentages reflected the combination of this rapid but decelerating advance in sales with a more gradual but more strongly sustained rise in costs. Labor cost, depreciation, and indirect taxes all contributed in one way or another to the latter effect.

The adjacent chart, based on table 3, shows the broad pattern of postwar change in corporate cost structure from 1945–46 to the peak of the profit-sales ratio in 1950–51, and thereafter. As noted above, cost purchases are unconsolidated.

The early changes shown in the second bar of the chart tended to raise the cost purchases percentage as well as the profits percentage of total charges, while lowering the labor cost and depreciation fractions. After 1950–51, all these tendencies were reversed as indicated in the third bar, and the average distribution of charges shown for 1952–54 is not much different from the average for 1945–46. The shifts between 1951 and 1954 were generally consistent in direction from year to year, as table 3 suggests; the changes would appear somewhat larger if 1952 were omitted from the terminal-period average and somewhat smaller if 1954 were omitted. In any case, it appears that the decline in profit ratios since 1951 has been associated with expansion in the labor cost ratio and in the (much smaller) fraction of revenue absorbed by capital consumption allowances and taxes. Cost purchases seem to have fallen off in relative importance during this period.

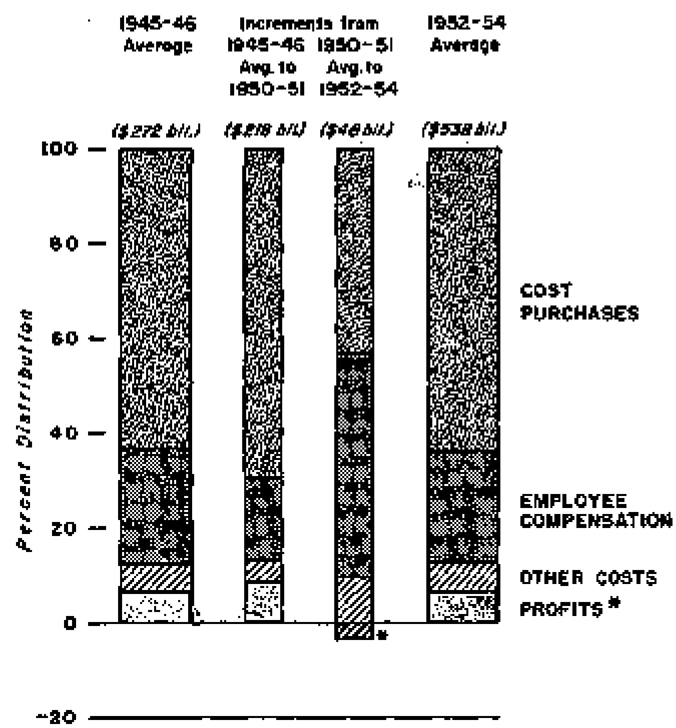
Cost purchases rose from a ratio of under 64 percent of adjusted sales in 1945–46 to 66 percent in 1950–51, substantially all of the advance coming in the years immediately after the war. The ratio declined year by year thereafter to 63 percent in 1954.

The percentage of cost purchases to sales differs considerably from industry to industry. Like the property income fraction discussed above, therefore, the all-industry percentage fluctuates with changes in the industrial composition of output, as well as with changes in the ratios for individual industries such as may accompany shifts in technology, in the extent of vertical integration, or in buying prices relative to selling prices. Its swing over the postwar period appears to have reflected chiefly the price trends, though changes in the relative importance of the different industries have also played a recognizable role in the broad movement charted.

While indexes of the relevant prices as such are not available, their broad movements can be inferred from the series used in table 4. Cost purchases from abroad and from agriculture are represented in the table by the price series on imports and farm products respectively; the movements in the wholesale price index for nonfarm commodities may be attributed in a general way to the prices of goods bought from and sold to nonfarm noncorporate business (as well as to intercorporate transactions); and the deflator for private gross product—based on prices of consumer goods and services, producers' goods, purchases by government, and net exports—serves broadly as an indicator of the prices of other corporate products. Using apparently reasonable weights for these various series, it appears that, relatively to corporations' selling prices, their buying prices rose in the early postwar period and declined after 1951.[5]

The net prices received for the specifically corporate contribution to gross national product—corporate gross product, or adjusted sales less cost purchases—accordingly seem to have advanced more slowly than selling prices in the early years and showed slightly less flattening in the later period. These relative movements in prices are consistent with the swing in the ratio of cost purchases to adjusted sales, and probably largely explain the course of the latter as outlined above.

Percentage Distribution of Corporate Sales



* Profits before tax, including inventory valuation adjustment; profits averaged lower in 1952–54 than in 1950–51

U. S. Department of Commerce, Office of Business Economics

The "other costs" shown in the chart are capital consumption allowances and taxes, a small allowance for business transfer payments being included with the latter and cash subsidies being netted out. The balance of corporate interest payments over interest receipts is also included.

The total amounted to a little over 6 percent of revenue in 1945, when it included a substantial amount of emergency amortization, and to somewhat less for 1945 and 1946 together. The fraction reached a postwar low point at 5 percent in the two following years and stood close to the same figure in 1951. By 1954 it again slightly exceeded 6 percent, the effect of Federal excise tax cuts in that year being offset by the combination of a rise in capital consumption (including emergency amortization) and a dip in corporate revenues.

[5] This pattern emerges whether the weights assigned to the index of nonfarm commodities allow for intercorporate transactions or not.

It may be noted that divergence of the price indexes applicable to consolidated totals from those applicable to unconsolidated totals would tend to cause divergence of the profit ratio based on sales as denominator from that based on income originating. Such a tendency has not been of major practical significance in this period, however.

Throughout the period after 1946, the major factor in the advance of the percentage was the expansion of capital consumption allowances.

The general rise in the indirect business tax base and depreciation base with the growth of the economy played a large part in the postwar dollar increase of these costs. Heavy outlays year after year for plant and equipment expansion have been a trend factor in both the property tax and depreciation bases, and the excise tax base has of course been affected by higher sales. Tending to raise these costs in relation to sales have been the advances in rates. Tax rates have shown the influence of the fiscal needs of State and local governments to finance current services and capital expansion, and of the Federal Government for defense purposes.

Depreciation rates have reflected the faster write-offs as equipment, which is shorter-lived on the average than is plant, increased in percentage of the combined stock; the rise in emergency amortization allowances after 1950 has also had a perceptible effect. A variety of transitory conditions not lending themselves to general analysis has led to fluctuations in the annual rate of growth of capital consumption allowances, but the underlying trend has been strongly upward throughout.

The growth of corporate employee compensation lagged behind that of revenue in the late nineteen-forties, but surpassed it after 1950. The total includes not only wages and salaries but also an increasing proportion of supplements such as employer contributions to private pension plans. Labor cost absorbed about one-fourth of the revenues of the average corporation in 1945 and 1946, and not much more than one-fifth in 1950–51. Successive annual increases thereafter carried the ratio up to around one-fourth again in 1954.

The role of employee compensation in the postwar swing of profit ratios may be clarified by placing the analysis in the framework of corporate gross product, which equals the balance of adjusted sales over cost purchases and is distributed among income originating, indirect taxes, and capital consumption allowances as shown in table 3.

The percentage rise in gross product, like that in revenue, exceeded the gain in employee compensation during the early postwar period but fell short of it after 1951. A similar pattern of contrast between the subperiods before and after the turning point of the profits percentage is indicated for World War II.

These differences can conveniently be thought of as price phenomena. The physical volume of output may serve as a common denominator for current-dollar gross product and for employee compensation, the quotients representing an index of gross product prices in the case of the former and labor cost per unit of output in that of the latter. The course of the totals as outlined above may be described in these terms as implying that gross product prices rose faster than unit labor costs in 1946–50, as in 1938–42, but advanced more slowly than unit labor cost in the periods immediately afterward.

If it may be assumed (on the grounds noted in the technical appendix) that the price index for private nonfarm gross product as a whole is reasonably applicable to corporate gross product separately, then this analysis may be illustrated as shown in the text table. Base and terminal values are here represented by 2- or 3-year averages, in order to bring out the broad trends. In the upper panel, gross product and employee compensation are analyzed into volume and unit price or cost factors. The volume series treated as common to both appears in line 3. The index of price per unit of real product is shown in line 2, and the course of unit labor cost in line 5. In the lower panel, the average growth rates of these price and volume factors are compared for each of the four broad time periods.

	1938–39	1942–43	1944–45	1946–48	1950–51	1953–54
	Averages					
1. Gross product (billion dollars)	43.3	93.1	101.4	100.0	166.6	193.7
2. Gross product price index (1947=1.00)	.62	.78	.82	.88	1.13	1.21
3. Real gross product (1÷2)	69.8	119.4	123.3	110.1	147.6	160.4
4. Employee compensation (billion dollars)	28.0	57.9	66.0	68.3	104.4	120.6
5. Employee compensation per dollar of real gross product (4÷3)	.40	.49	.53	.67	.71	.70
	Average annual rate of rise (percent) from preceding period					
6. Gross product (value)		21	4		11	6
7. Price index		6	3		6	3
8. Real gross product		14	2		6	3
9. Employee compensation		20	6		10	8
10. Unit labor cost (line 5)		5	4		4	4

Relatively large increases both in volume of output and in prices characterized the early part of each period; these advances slowed in the later part. The differential movements in gross product prices and in unit labor cost which underlie the observed changes in the ratio of employee compensation to gross product (and to sales) are also clearly apparent. While the average annual increase in unit labor cost was about as great percentagewise after 1950–51 as before, the average price advance was halved. Such short-term disparities of movement between gross product prices and unit labor costs, it should be noted, are in contrast to the long-term parallelism of the two which is suggested by the secular stability of property income—and hence of labor income—in percentage of total income originating.

Unit labor costs can be analyzed further by considering them as the product of hourly compensation rates times labor hours required per unit of output. Underlying the comparatively steady rise of unit labor cost shown in the table were pay rate increases which were larger percentagewise in the earlier years of the postwar period than afterwards, and reductions in unit labor requirements which were similarly greater in the earlier years. In terms of effect on unit labor cost, such reductions offset a higher proportion of the large wage increases prior to 1950–51 than of the further pay advances which followed. (See technical appendix.)

Table 4.—Data Relevant to Corporations' Buying, Selling and Gross Product Prices

	1946	1947	1948	1949	1950	1951	1952	1953	1954
	(Percent change from preceding year)								
Import prices	11	23	10	−5	8	20	−5	−4	3
Wholesale prices: farm products	16	20	7	−14	5	15	−6	−9	−1
Wholesale prices: other commodities	14	23	8	−3	4	10	−2	(3)	(3)
Final-product prices [1]	9	12	6	1	1	8	1	1	1
Deflator for private nonfarm [2] gross product	9	11	7	1	1	7	2	2	2
Private nonfarm [2] employee compensation per hour	8	11	9	4	5	9	6	6	4

[1] Deflator for gross national product other than that of general government.
[2] Data for the U. S. nonfarm economy excluding general government.
[3] Change less than one-half of one percent.

Sources: U. S. Department of Commerce, Office of Business Economics and Bureau of Foreign Commerce; Department of Labor, Bureau of Labor Statistics.

The broad shifts just summarized involved shorter-term variations which are reflected in tables 3, 4 and 5. The more important of these will be examined below.

Early postwar experience

The initial postwar decline in the ratio of profits to sales (table 3) is largely traceable—aside from the loss of production in some industries during reconversion—to the shift from war to peacetime sales patterns, and to the continued upward pressure of labor costs, much of which had remained latent under wartime controls. There was a sharp increase in the relative contribution of trade to total corporate sales. This in itself involved a decline in the all-industry average profit ratio on sales, since the cost purchase ratio for this industry division is considerably higher and its earnings ratio lower than the average. With this shift and the greater advance in corporate buying prices than in corporate selling prices, the rise in total cost purchases absorbed all but about $4 billion of the 1945–46 expansion in adjusted sales. At the same time there was an advance of $5½ billion in the total compensation of corporate employees, reflecting the first round of wage increases and some rise in labor requirements.

The sales and cost changes which produced the broad upswing of profit margins in the years which followed did not, of course, all occur simultaneously.

There was a sharp rise in adjusted sales through 1948. The further gain to 1950, when the profit ratios reached their peak, was considerably smaller. It was interrupted by the 1949 recession, and on balance both price and volume increases tended to slow. The changes in final demand which underlay these developments are suggested by table 5.

Cost purchases absorbed a little more than a pro rata share of the initial sales expansion, corporate buying prices advancing more rapidly than selling prices. The margin available for other costs and profits—i. e., corporate gross product—nevertheless increased by almost $40 billion in this period, as against an expansion of only $15 billion from 1948 to 1950.

Table 5.—Annual Changes in Expenditures for Business Gross Product

	1946	1947	1948	1949	1950	1951	1952	1953	1954
	(change from previous year, in billions of dollars)								
Business gross product	3.5	25.8	21.4	−2.5	25.2	35.6	12.7	17.6	−4.8
Consolidated sales	3.6	34.0	19.9	3.7	17.4	30.0	20.1	19.3	−1.6
To consumers	25.0	17.3	11.6	2.3	12.4	13.4	9.0	10.0	5.6
Durables	7.8	4.7	1.6	1.4	5.0	−1.5	−.5	3.2	−.5
Nondurables	12.3	8.5	5.7	−1.9	3.6	10.4	4.7	2.7	2.0
Services	4.9	4.1	4.3	2.8	3.8	4.4	4.8	5.0	4.1
To government	−35.8	1.0	6.0	3.4	−2.0	14.5	11.1	5.9	−7.0
To business on capital account	9.6	9.7	6.3	−1.7	8.6	2.6	.3	3.4	−.1
Construction	6.6	3.7	3.8	−.5	5.8	.6	.4	3.1	2.0
Producers' durable equipment	3.1	5.9	2.4	−1.3	3.8	2.0	−.1	1.8	−2.1
To abroad	4.7	6.0	−3.1	−.2	−1.0	4.4	−.8	−.0	.7
Change in inventories	7.2	−7.1	5.2	−6.9	10.1	3.0	−7.0	−1.6	−4.0
Less: Purchases from abroad	1.2	1.1	1.0	−.0	3.4	2.3	−.2	.1	−.7

Source: U. S. Department of Commerce, Office of Business Economics.

Indirect taxes and capital consumption allowances absorbed about $4 billion of each of these advances. Employee compensation, rising comparatively slowly, took about half the increase in gross product in each period, leaving profits $13 billion higher in 1948 and up another $4 billion in 1950. The early rise in profits was relatively much sharper than those in sales and gross product, while the 1948–50 advance was only a little more than proportional.

There was an interesting contrast between these two periods in the factors underlying the slower growth of employee compensation than of gross product. While the higher pay rates associated with the second and third rounds of wage increases were accompanied by significant declines in labor requirements per unit of output, on balance there was a considerable rise from 1946 to 1948 in unit labor cost. In the sellers' market of the time, however, advancing product prices more than offset the effect of this cost increase. The favorable relative price movements of 1949 and the general price advance from 1949 to 1950 involved some further increases in prices attributable to corporate gross product; unit labor cost seems to have been approximately stable in this period, as the uptrend in hourly rates of employee compensation slowed to a rate comparable with that of the advance in industrial efficiency.

Shifts since 1950

The 1951–54 period, during which overall profit ratios declined, witnessed notable year-to-year fluctuations in sales but was more homogeneous with respect to shifts in cost structure than the earlier postwar period.

The rise in sales at the beginning of this period reflected growth in the physical volume of output as well as sharp price advances. While the basic trend of sales continued upward in subsequent years, the expansion slowed in 1952 and was temporarily checked in 1954, so that the overall average rate of increase was considerably smaller than in the half-decade after World War II.

The uptrend of gross product was somewhat better sustained, as cost purchases absorbed a declining fraction of sales revenue. As noted earlier, for the period as a whole this tendency was apparently the result of differential movements in corporate buying and selling prices. As compared with its $15 billion advance from 1948 to 1950, gross product showed a gain of over $30 billion in the next two years. There was a further increase of $14 billion in 1953, followed by a $5 billion dip in 1954.

To minimize the effect of the 1953–54 business readjustment, it is convenient to outline the changes in cost structure in terms of the allocation of the $44 billion rise from 1950 to 1953. With the growth in emergency amortization allowances, and reflecting the general postwar base and rate trends noted earlier, capital consumption allowances continued to rise year by year in relation to gross product. This item together with indirect taxes took nearly $8 billion of the gross product expansion. Employee compensation rose to absorb almost all the remainder, leaving only $2 billion for the increase in profits.

Employee compensation rose relatively more than gross product in each of these years. Annual data suggest that the pattern underlying this trend was similarly consistent from year to year. The increases in prices attributable to corporate gross product fell short of the successive annual advances which occurred in unit labor cost as average pay rates tended to rise somewhat more rapidly than unit labor requirements could be reduced.

This pattern continued in 1954. Data on employee compensation and corporate profits for the first three quarters of 1955 reveal a significant change, however. For the first time since 1950, according to the available evidence, profits seem to have shown a larger annual percentage increase than employee compensation, implying a slower rise in unit labor cost than in gross product prices.

BOOK PROFITS AND TAXES

Book profits before taxes, unadjusted for inventory valuation and including the net foreign balance, rose from a reconversion low of $19 billion in 1945 to a peak of over $41 billion in 1951. The total dipped sharply in 1952, recorded a partial recovery in the following year, and receded to $34 billion in 1954. The strong upswing which developed late in that year and continued into 1955 carried the seasonally adjusted annual rate for the first nine months of last year to about $43 billion.

The industry pattern of postwar growth in profits before taxes resembled that described above for adjusted before-tax earnings. The chief differences stemmed from the concentration of inventory gains and losses in trade and manufacturing. Large gains in 1946–48 and 1950 and inventory losses in 1949 and 1952 affected book profits in these industries rather substantially (table 2).

Short-term swings in profits are generally more marked in this measure than in the series adjusted for inventory valuation (see chart), because of the tendency for expansion of business activity to be accompanied by rising prices and associated inventory gains and for contraction to coincide with price declines and inventory losses. This pattern was distorted somewhat in the early postwar period—inventory gains following price decontrol carried book profits upward on an annual basis from 1945 to 1946 in the face of a decline in national income—but was clearly apparent in later years. The comparative movements of profits with and without the inventory valuation adjustment from 1945 to the first 9 months of 1955 were very similar, each measure advancing by about 125 percent.

In long-run comparisons significant differences may arise, e. g., from a secular change in inventory-sales ratios, from a curvilinear price trend, or from changes in accounting methodology. The effects of long-run changes are difficult to measure empirically, however, because short-term price movements complicate the trend analysis. Thus the considerably sharper rise in unadjusted than in adjusted profits from the 1926–29 period average to that of 1950–53 seems to have been due in large part to the post-Korean price advances, which had no analogue in the earlier period.

Taxes on profits

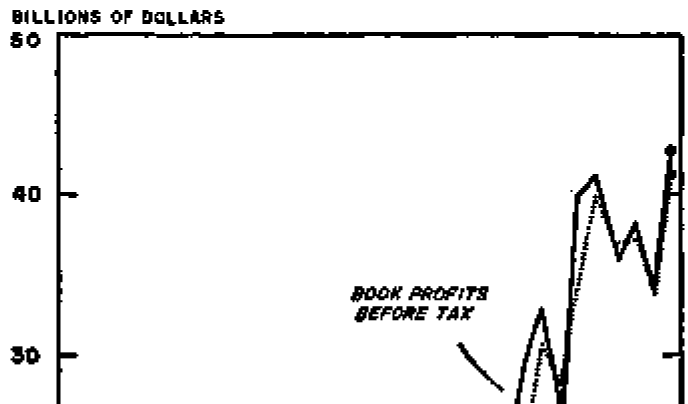
The level of corporate profits taxes is determined chiefly by the volume of before-tax profits and the statutory rates of Federal taxes. In all but two of the years between 1922 and 1954, the total of corporate profits tax liabilities moved in the same direction as before-tax book profits. In the two years when the direction of movement differed, 1928 and 1946, substantial rate reductions offset expansion in the tax base.

Corporate profits tax liability dropped nearly $4 billion between 1944 and 1946 with the end of the Federal excess profits tax and a cut in the income tax rate. Thereafter the annual liability fluctuated about in proportion to before-tax net income until 1950, when a new excess profits tax and an increase in income tax rates went into effect. From $10½ billion in 1949, total taxes on income rose with gains in taxable income and advancing tax rates to $18 billion in 1950 and $22½ billion in 1951. The aggregate fell back to $20 billion in the following year, as the effect of the decline in profits more than offset the small increase in tax rates and recovered only partially in 1953. With the business readjustment after mid-1953 and the termination of the excess profits tax at year-end, tax liability dropped to $17 billion for 1954, from which it advanced to a seasonally adjusted annual rate of around $21 billion in the first three quarters of 1955.

Taxes on corporation profits are presented for broad industry divisions in table 2. In comparing these figures with those shown for before-tax profits, it should be noted again that the definition of the latter departs in several important respects from that of taxable income. (See first footnote to this article.)

During the period from 1950 to 1953, tax liabilities averaged 52 percent of before-tax net income. This rate compared with an average of 15 percent in 1926–29, when the regular income tax rate was much lower and there was no excess profits tax. In the later period tax liabilities were more than 15 times as large as in the earlier, while before-tax profits were 4⅓ times and profits after tax were 2⅓ times those of 1926–29. Roughly similar differences appear if the levels of 1954–55, when effective tax rates averaged around 50 percent, are compared with the late twenties.

Corporate Profits — *Principal Measures*



* *Book profits before tax, plus inventory valuation adjustment*

U. S. Department of Commerce, Office of Business Economics 56-1-10

After-tax profits increased from a little over $8 billion in 1945 to a peak $22 billion in 1950. A dip to $18½ billion followed in 1951 as taxes rose, and the total declined further to $16 billion in 1952. It held level at roundly $17 billion in 1953 and 1954 and rose to a seasonally adjusted annual rate of $21 billion for January–September 1955.

The long-term uptrend in after-tax profits of course reflects the participation of profits in the general growth of the economy and the accompanying rise of corporate business over the decades spanned in the comparison. If the expansion in total income originating in corporations is taken as a measure of the growth factor, after-tax profits appear not to have kept pace. Such profits, excluding the net foreign balance, averaged 16½ percent of corporate income originating in 1926–29, but only 11½ percent in 1950–53. As noted above, before-tax earnings adjusted for inventory valuation rose slightly in relation to income originating, and the decline in after-tax profits mirrors the increase in taxes over this period.

TECHNICAL APPENDIX

Sources of tables and charts

Tables 1 and 2 show totals and breakdowns of corporate profits which have been published for 1952–54 in the July 1955 SURVEY, and for 1929–51 in the 1954 *National Income* supplement to the SURVEY (Part V), tables 1, 18, 20, 21, and 23. Nos. 18 and 23 of these tables together provide the basis for the statistics of profits plus inventory valuation adjustment by industry division, and the further break between durables and nondurables manufacturing is derived from the underlying worksheets.

Table 3 comprises the detailed estimates of income originating in corporate business and of net change in corporate inventories which are shown in tables 13 and 33 of the regular national income series; and special estimates of other charges to corporate revenue and of corporate sales.

Corporate sales, as defined here, include (1) sales and operating receipts as summarized in No. 29 of the regular national income tables, (2) rents, royalties and miscellaneous receipts shown for the same industries in the tax return statistics (U. S. Internal Revenue Service, *Statistics of Income*, annual), (3) all of these income items for the finance, insurance and real estate industry division, from the same source, less estimates for mutual companies, (4) the portion of total indirect corporate taxes not reported as such among the deductions on Federal income tax returns, sales being assumed to have been reported net of such taxes, and (5) an allowance, based on data in *Statistics of Income* for 1934, for intra-system sales of companies segregated in the tax data as reporting on a consolidated basis. The latter allowance is a constant 6 percent of the sales of these companies, its dollar amount varying from year to year with that of sales reported on this net basis. Finally, cash subsidies paid by the Reconstruction Finance Corporation and its affiliates and by the Maritime Administration have been deducted. The net sales total for 1952 has been extrapolated forward through 1954 by component (1), which of course accounts for the vast bulk of it.

Corporate cost purchases are estimated as sales plus inventory accumulation less the sum of other charges: indirect taxes (less subsidies) and business transfer payments, capital consumption allowances, and (from No. 12 of the regular national income tables) corporate employee compensation, net interest, and profits including inventory valuation adjustment.

Indirect taxes (and nontaxes) are estimated as sums of components derived by percentage allocation of the indirect business tax and nontax series shown in No. 8 of the national income tables. As noted in the text, the resulting estimates are not at all precise, though the margin of error is believed insufficient to affect the conclusions drawn in this article.

To derive the tax estimate, an industrial distribution of indirect taxes was first prepared. Eight types of excises and other taxes imposed on sales as a base were assigned to the specific industries known to be legally responsible for their payment or distributed industrially by the available data on relevant sales of the various industries in 1947. Property taxes (net of those charged to persons in the derivation of the net rent component of national income) were distributed in general by industry capital assets, figures for which had been derived by raising the asset values for corporations filing balance sheets with the Treasury Department by ratios of total corporate and noncorporate sales in each industry to sales of such corporations in that industry. A major exception to this procedure was made for agriculture, a figure based on estimates by the Department of Agriculture being used in this case. Finally, a residual group of items which included customs duties and nontaxes and accounted for 13 percent of the final corporate indirect tax figure for 1947 was distributed by industry sales.

Estimated 1947 ratios of corporate to total sales were applied to the resulting industry tax totals for each of the categories separately distributed by industry. The resulting corporate tax figures for 1947 were summed for each of the ten categories and divided by the corresponding all-enterprise totals to obtain all-industry corporate percentages. Annual corporate taxes were then calculated by applying these percentages to the annual values for the various types of taxes in national income table 8 (or, in the case of property taxes, to these values less the amounts charged to persons).

The annual movement of the sum of these corporate taxes required correction to reflect shifts in the distribution of producers by legal form of organization. A correction for the war and early postwar years when such shifts were most important was made by reference to the estimated effects of the shifts on the corporate percentage of income originating plus capital consumption allowances (see below).

Included with the indirect taxes and nontaxes in table 3 is an allowance for corporate business transfer payments which represents about 3 percent of the combined total. The bulk of this allowance consists of corporate gifts to nonprofit institutions and consumer bad debts. The cash subsidies mentioned above have been deducted from the sum of taxes and transfers, reducing it around 10 percent in 1943–45 and much less in other years.

Capital consumption allowances consist chiefly of depreciation and amortization reported in the corporate tax returns, adjusted as shown in No. 38 of the national income tables for the reallocation of emergency amortization allowances at the end of World War II. Also included are judgmental percentage allocations of the various components of business charges for accidental damage and capital outlays charged to current expense; these allocations account for one-sixth to one-ninth of the estimated total of corporate capital consumption allowances.

The price series represented in table 4 cover noncorporate as well as corporate transactions, and are therefore only broadly applicable to corporate business as such.

The implicit price deflator for nonfarm private gross product, taken to indicate the course of prices attributable to corporate gross product, was based on the current- and 1947-dollar figures for gross product other than that of general government, less the corresponding totals for gross farm product. The estimates of farm product correspond to those published in the SURVEY for August 1954, but the deflated values are in terms of 1947 prices. The nonfarm private product price deflator was tested for applicability to corporate business by eliminating rough estimates for various components representing noncorporate product; no differences which would affect the conclusions drawn in the present report were made by eliminating these. It may be noted that the gross product price deflator implied by the current-dollar and crudely deflated estimates of adjusted sales less those of cost purchases was quite consistent in movement with this nonfarm private product deflator.

Private nonfarm employee compensation per hour was estimated by reference to data from the Bureau of Labor Statistics. The applicability of this series to corporate business was tested by making rough allowances for the proportion of corporate to total employment in each of the industries distinguished in the calculation; these allowances made no significant difference in the results.

The gross product price deflator and hourly compensation series just mentioned provided the basis for the estimates which underlie the text comments as to changes in unit labor requirements. Corporate employee compensation was divided by the hourly compensation series to yield an indicator of total man-hours worked in corporate business. Corporate gross product was divided by the price deflator to yield estimates of the real volume of corporate output. Finally, the latter series was divided into that on total man-hours to obtain the indicator of unit labor requirements. The results were closely consistent with previous estimates of unit labor requirements, which, it may be noted, are based on essentially similar methodologies and data sources.

The values shown in table 5 are derived from those in national income tables 7 and 11.

The first chart presented in the report is based on the adjusted profits totals in table 3. The second and third charts employ data published in No. 12 of the regular national income series for 1929 and later years. The special extension of these estimates from 1929 back to 1922 utilized industry data from corporation tax returns. Conceptual adjustments required by the reported profits figures were made on the basis chiefly of data from the same source, supplemented by estimates from Simon Kuznets, *National Income and Its Composition, 1919–38* (New York, National Bureau of Economic Research, 1941). Material from the latter report was also used in the extrapolation of corporate employee compensation; and both sources were employed together with compilations by the Federal Reserve Board in extrapolating net monetary and imputed interest, the remaining component of total income originating in corporate business. The 1922–28 estimates charted are as follows.

Year	Income originating in U. S. corporations (Billions of dollars)	Percentage of income originating	
		Profits	Total property income
1922	30.4	16	30
1923	37.7	19	32
1924	36.1	17	31
1925	38.3	19	33
1926	42.3	22	35
1927	40.7	19	33
1928	41.8	20	34

The percentages shown in the fourth chart are calculated from table 3.

The values shown in the last chart are taken for 1929 and later years from national income table 1. For 1922–28, they are derived as indicated above in connection with the second and third charts, with the addition of an allowance based on the balance of payments statistics for net inflows of property income from abroad. The totals for these years are shown in the following table in billions of dollars.

Year	Adjusted profits	Book profits	
		Before tax	After tax
1922	5.1	5.3	4.9
1923	7.4	7.6	6.6
1924	6.3	6.1	5.1
1925	7.4	7.6	6.4
1926	9.0	8.4	7.0
1927	8.0	7.4	6.1
1928	8.6	8.6	7.4

Share ratio analysis

The analysis of shifts between 1929 and 1951 and between 1926–29 and 1950–53 in the property income fraction of income originating attempted to distinguish the effects of two sources of change in this fraction: shifts in the fractions for individual products; and shifts in the product mix.

There are serious practical difficulties in the way of measuring the respective effects of these two sorts of change on the trend of the property income fraction. Perhaps the most obvious is that the available statistical data apply to industries producing large groups of products, rather than to individual products, and market shifts affecting the relative composition of any group will affect the estimates as though they were due to changes in conditions of production rather than in the type of output. However, their effect on the measure of the latter may be in either direction, and therefore cannot be assumed to bias the result.

Secondly, short-run swings in the property income fraction are so large that even a moderate difference in cyclical position between the earlier and later periods compared may affect the validity of possible conclusions as to secular trends unless these trends are unusually pronounced. For example, the rapid decline in profits with the onset of the business readjustment in the latter part of 1953 is estimated to have contributed 1¼ percentage points to the overall difference of 3¼ points shown in chart 2 between the fraction for the full year 1953 and that for 1929.

Finally, the conventional procedure for separating the effects of the two factors on the property income ratio involves holding each in turn constant while the direct effect of the other is measured. The sum of the two direct effects so measured will not in general be equal to the total amount of the observed change in the ratio. Moreover, the coefficients representing the two effects will differ according to whether the factors are held constant at their initial or at their terminal values. The usual method of eliminating these ambiguities is to use cross-weights, a procedure which is tantamount to averaging the alternative measures obtained by use of initial- and terminal-period values as bases. The sum of the resulting coefficients is equal to the total amount of the change, the original discrepancy in effect being distributed equally between the two.

The values obtained in the present study are shown below before and after the application of this averaging procedure.

Comparisons	Change in property income percentage of total corporate income originating			
	Total	Due to— Intra-industry changes	Shifts in industry percent of corporate income	"Interaction"
	[Percentage points]			
1929 vs. 1951 (61 industries)				
1929 base weights	0.7	−0.9	−0.3	1.9
1951 base weights	.7	1.1	1.5	−1.9
Average	.7	.1	.6	....
1926–29 vs. 1950–53 (31 industries)				
1926–29 base weights	−.4	−.6	−2.2	2.4
1950–53 base weights	−.4	1.8	.2	−2.4
Average	−.4	.6	−1.0	....